

IN THE CLAIMS:

The following is a complete listing of the pending claims:

1. (currently amended) An optical data storage device comprising:

a substrate having oppositely facing first and second surfaces;

a first metal/alloy layer overlaying the first surface of the substrate, wherein the first metal/alloy layer comprises tin, antimony and an element selected from the group consisting of indium, germanium, aluminum, and zinc, and;

a first dielectric layer overlaying the first metal/alloy layer, wherein the first dielectric layer comprises silicon oxynitride, wherein the first metal/alloy layer is positioned between the substrate and the first dielectric layer, and wherein a thickness of the first dielectric layer is selected to enhance an optical contrast between an amorphous state of the first metal/alloy layer and a crystalline state of the first metal/alloy layer.

2. (original) The optical data storage device of claim 1 further comprising:

a second metal/alloy layer overlaying the second surface of the substrate, wherein the second metal/alloy layer comprises tin, antimony and an element selected from the group consisting of indium, germanium, aluminum, and zinc, and;

a second dielectric layer overlaying the second metal/alloy layer, wherein the second dielectric layer comprises silicon oxynitride, wherein the second metal/alloy layer is positioned between the substrate and the second dielectric layer.

3. (original) The optical data storage device of claim 1 wherein the first metal/alloy layer has a cross-sectional thickness between 40nm and 125nm.

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4. (original) The optical data storage device of claim 1 wherein the first dielectric layer has a cross-sectional thickness between 20nm and 120nm.
5. (original) The optical data storage device of claim 1 wherein the first dielectric layer has a cross-sectional thickness of approximately 60nm and the first metal/alloy layer has a cross-sectional thickness of approximately 85nm.
6. (original) The optical data storage device of claim 1 wherein the substrate comprises a rigid material.
7. (original) The optical data storage device of claim 1 wherein the metal/alloy layer comprises $\text{Sb}_{70}\text{Sn}_{15}\text{In}_{15}$.
8. (original) The optical data storage device of claim 1 wherein the first metal/alloy layer is formed using a sputtering technique.
9. (original) The optical data storage device of claim 1 wherein the first metal/alloy layer is formed using a vapor deposition technique.
10. (original) The optical data storage device of claim 1 wherein a real part of refractive index for the first dielectric layer is between 1.4 and 2.0.
11. (original) The optical data storage device of claim 1 wherein the first surface of the substrate is grooved, wherein grooves of the first surface define raised surface portions, recessed surface portions, and side walls therebetween.

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12. (original) The optical data storage device of claim 1 wherein the first metal/alloy layer comprises a grooved surface, wherein grooves of the first metal/alloy layer define raised surface portions, recessed surface portions, and side walls therebetween, wherein the raised surface portions are configured to store optical data.

13. (currently amended) A method comprising:

forming a first metal/alloy layer overlaying a first surface of a substrate wherein the first metal/alloy layer comprises tin, antimony and an element selected from the group consisting of indium, germanium, aluminum, and zinc, and;

forming a first dielectric layer overlaying the first metal/alloy layer, wherein the first dielectric layer comprises silicon oxynitride and has a thickness selected to enhance an optical contrast between an amorphous state of the first metal/alloy layer and a crystalline state of the first metal/alloy layer, and wherein the first metal/alloy layer is positioned between the substrate and the first dielectric layer.

14. (original) The method of claim 13 further comprising:

forming a second metal/alloy layer overlaying a second surface of the substrate, wherein the second metal/alloy layer comprises tin, antimony and an element selected from the group consisting of indium, germanium, aluminum, and zinc, and;

forming a second dielectric layer overlaying the second metal/alloy layer, wherein the second dielectric layer comprises silicon oxynitride, wherein the second metal/alloy layer is positioned between the substrate and the second dielectric layer.

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15. (original) The method of claim 13 wherein the first metal/alloy layer has a cross-sectional thickness between 40nm and 125nm.
16. (original) The method of claim 13 wherein the first dielectric layer has a cross-sectional thickness between 20nm and 120nm.
17. (original) The method of claim 13 wherein the substrate comprises a rigid material.
18. (original) The method of claim 13 wherein the metal/alloy layer comprises $\text{Sb}_{70}\text{Sn}_{15}\text{In}_{15}$.
19. (original) The method of claim 13 wherein the first metal/alloy layer is formed using a sputtering technique.
20. (original) The method of claim 13 wherein a real part of refractive index for the first dielectric layer is between 1.4 and 2.0.
21. (cancelled)

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